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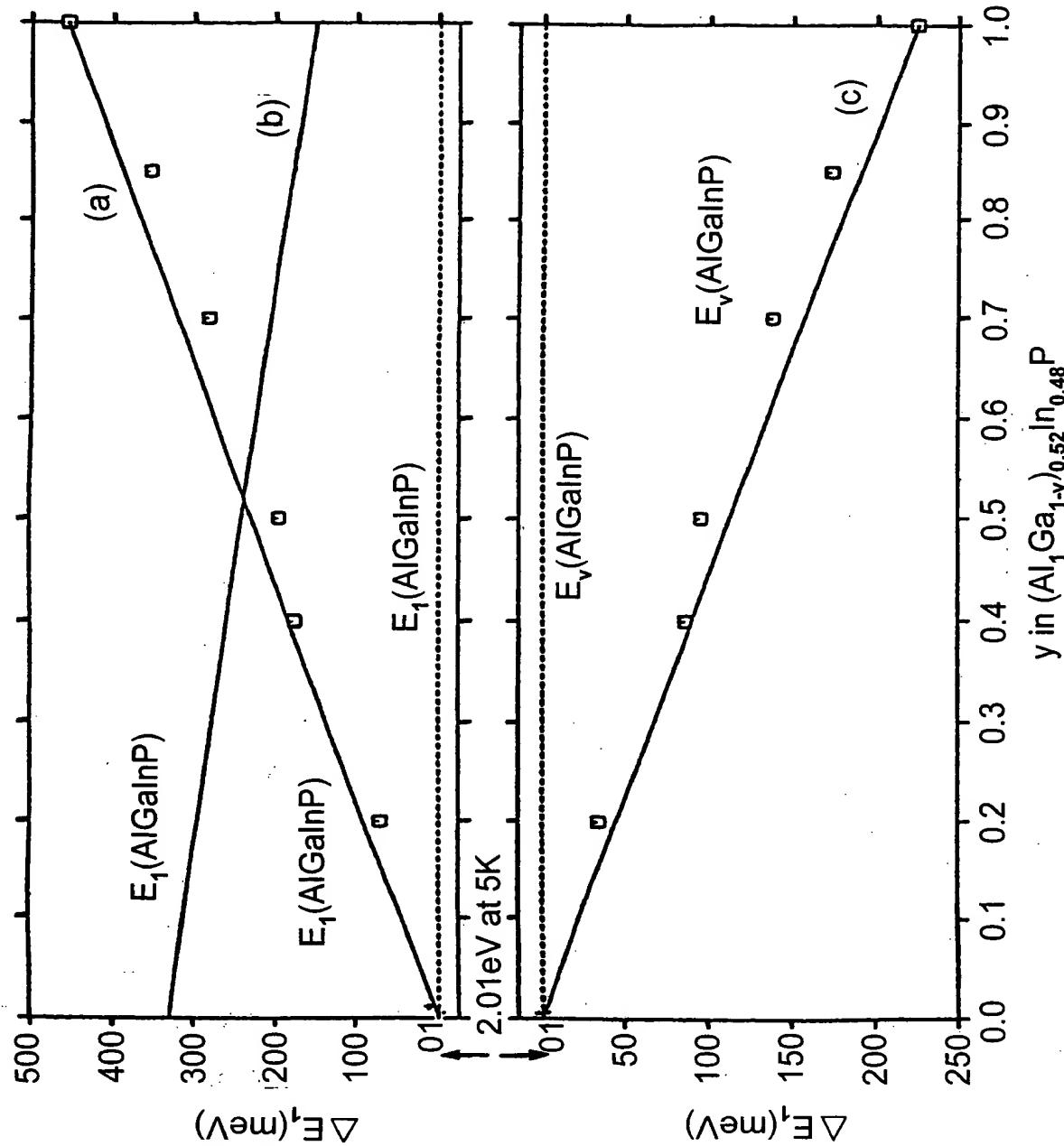


FIG. 1

A diagram of the variation of the  $Al_1Ga_{1-y}In_{0.48}P/(AlGaInP)$  heterobarrier height (meV) as a function of aluminium mole fraction in the quaternary alloy assuming a 70 : 30 band offset ratio



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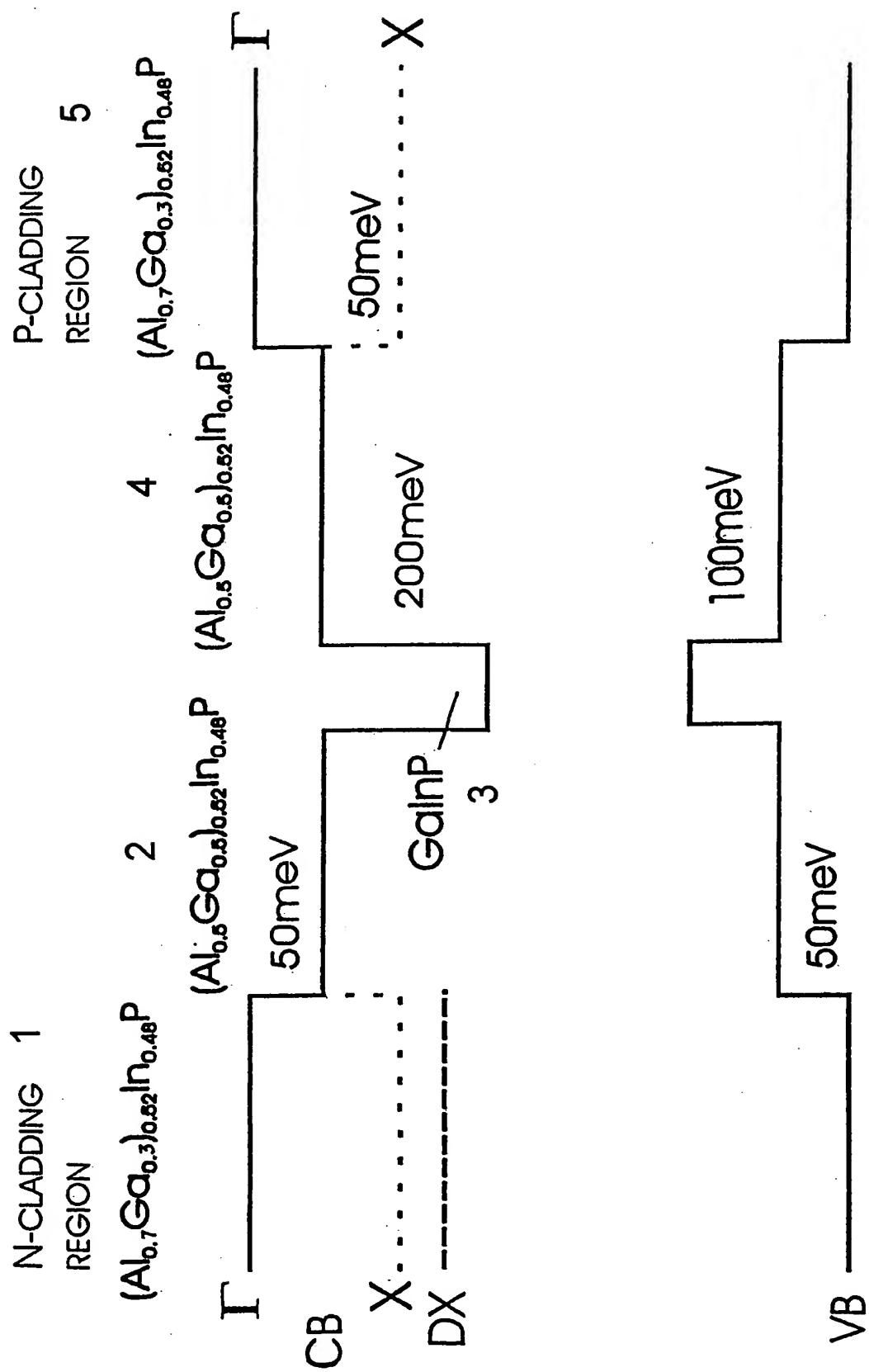


FIG. 2



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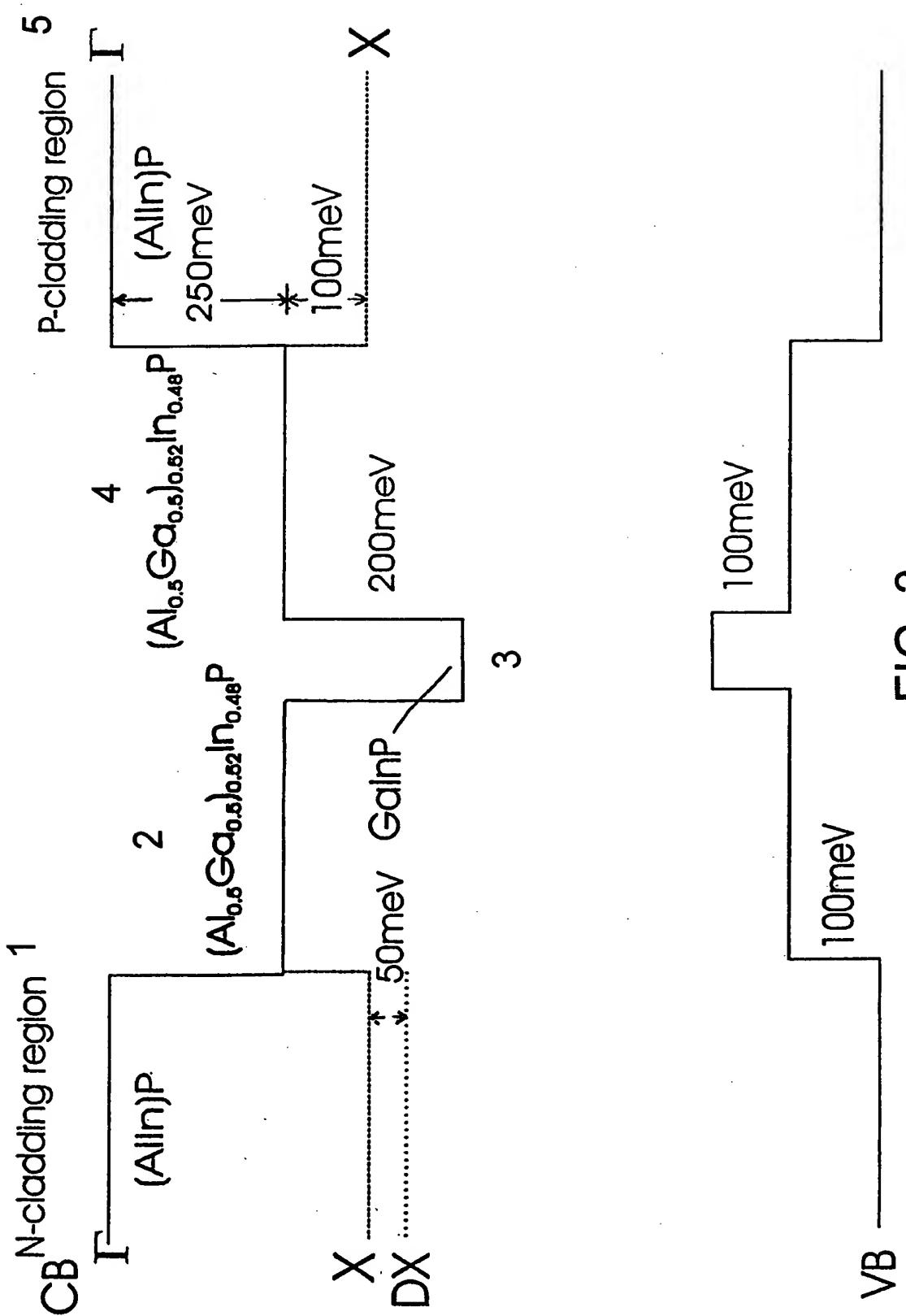
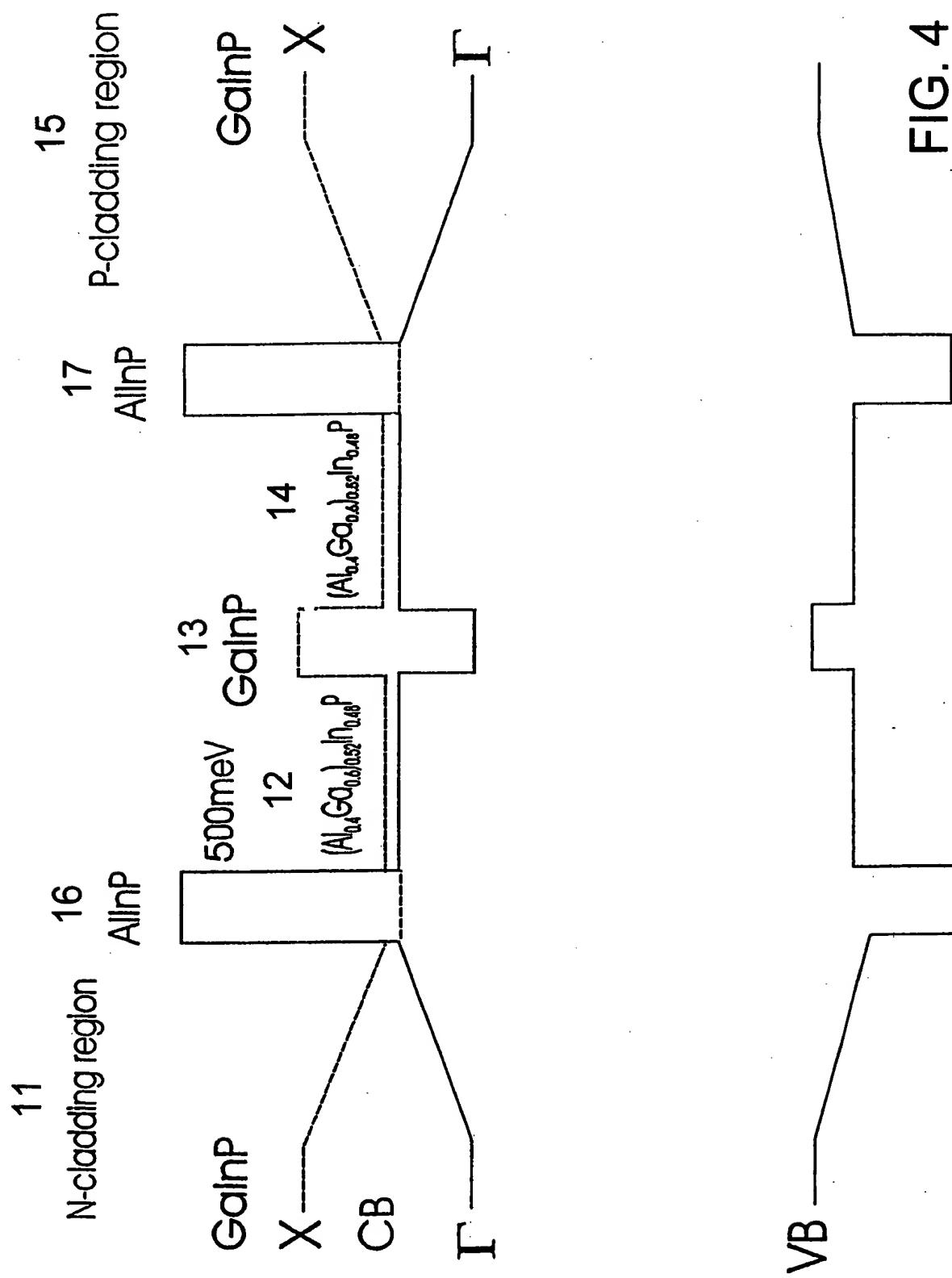
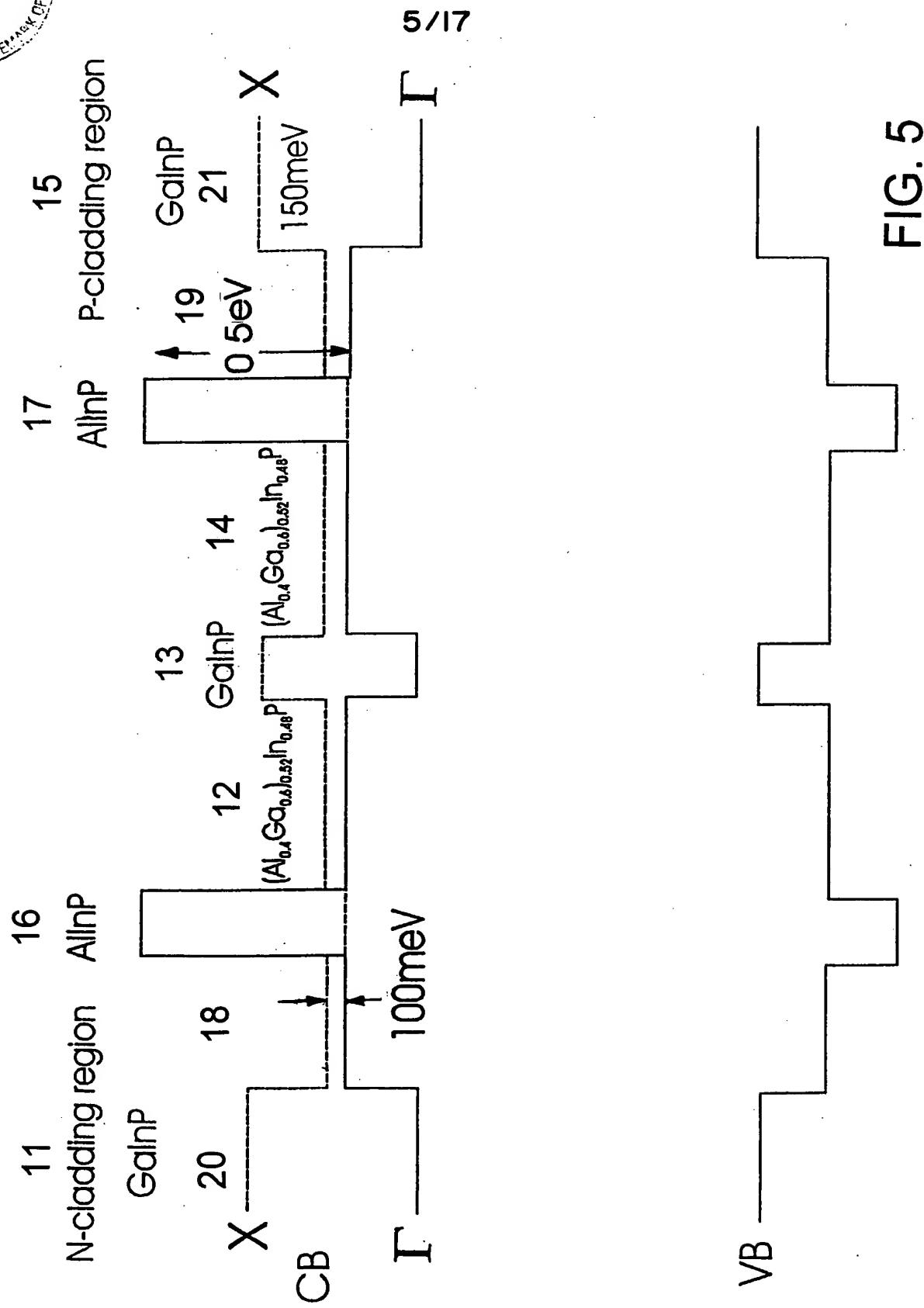


FIG. 3



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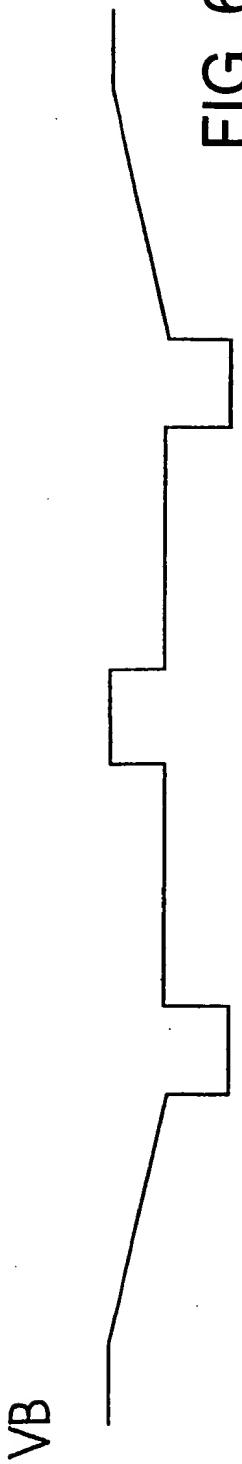
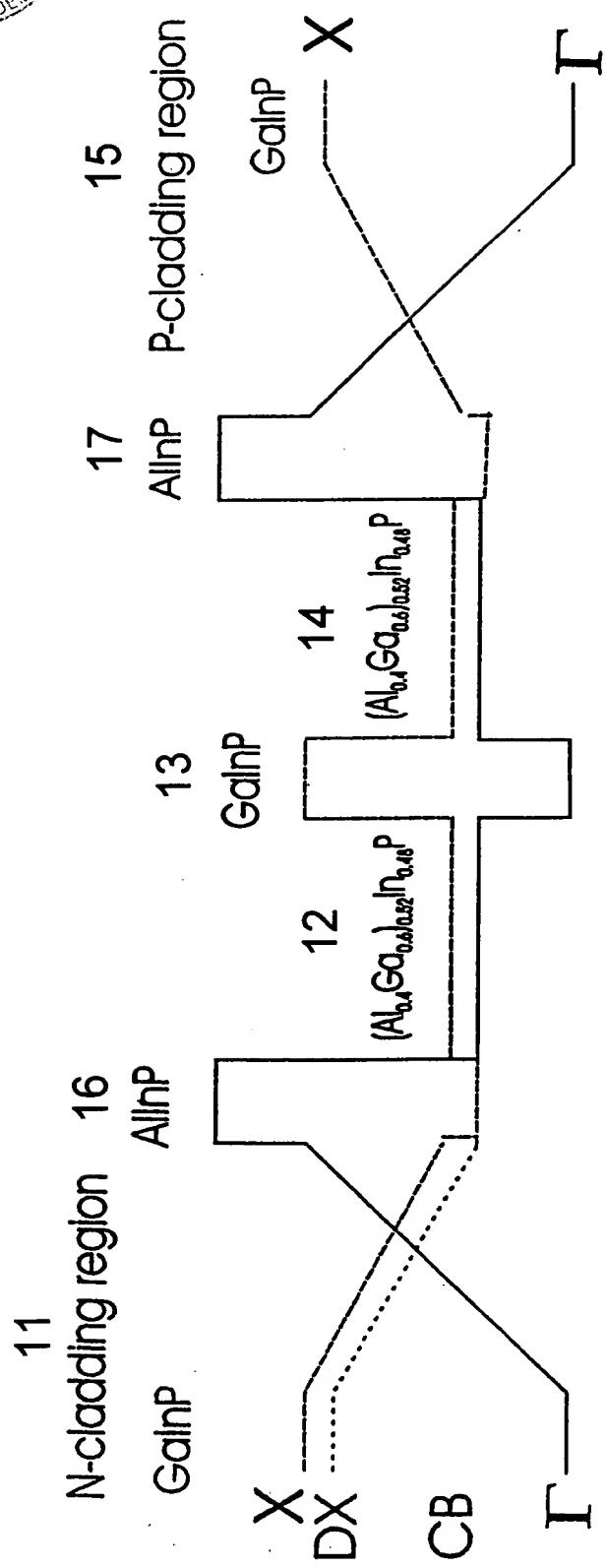


FIG. 6



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GaInP Silicon Doping

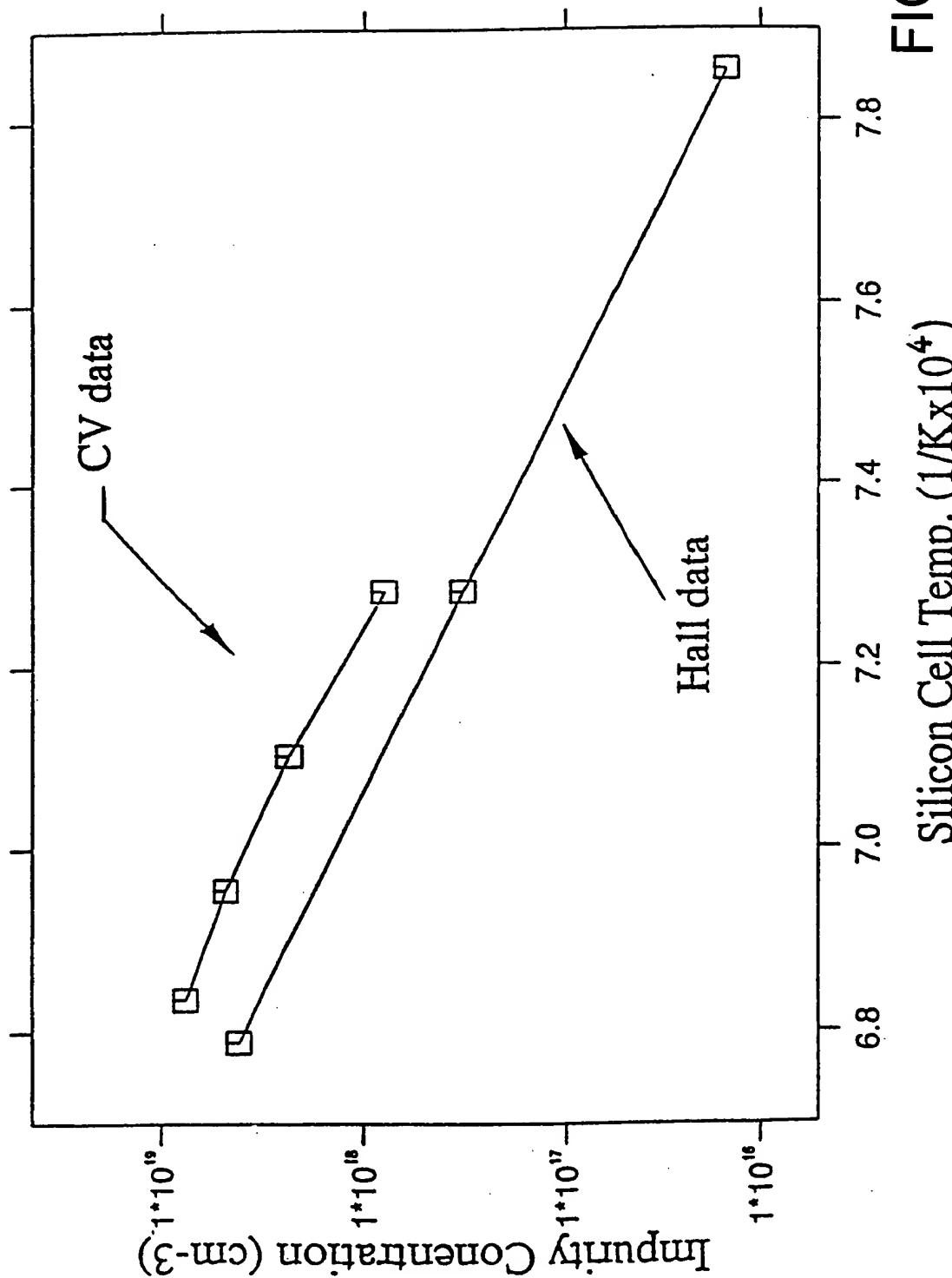


FIG. 7  
Silicon Cell Temp. ( $1/\text{K} \times 10^4$ )



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AlGaInP ( $y=0.7$ ) Silicon Doping

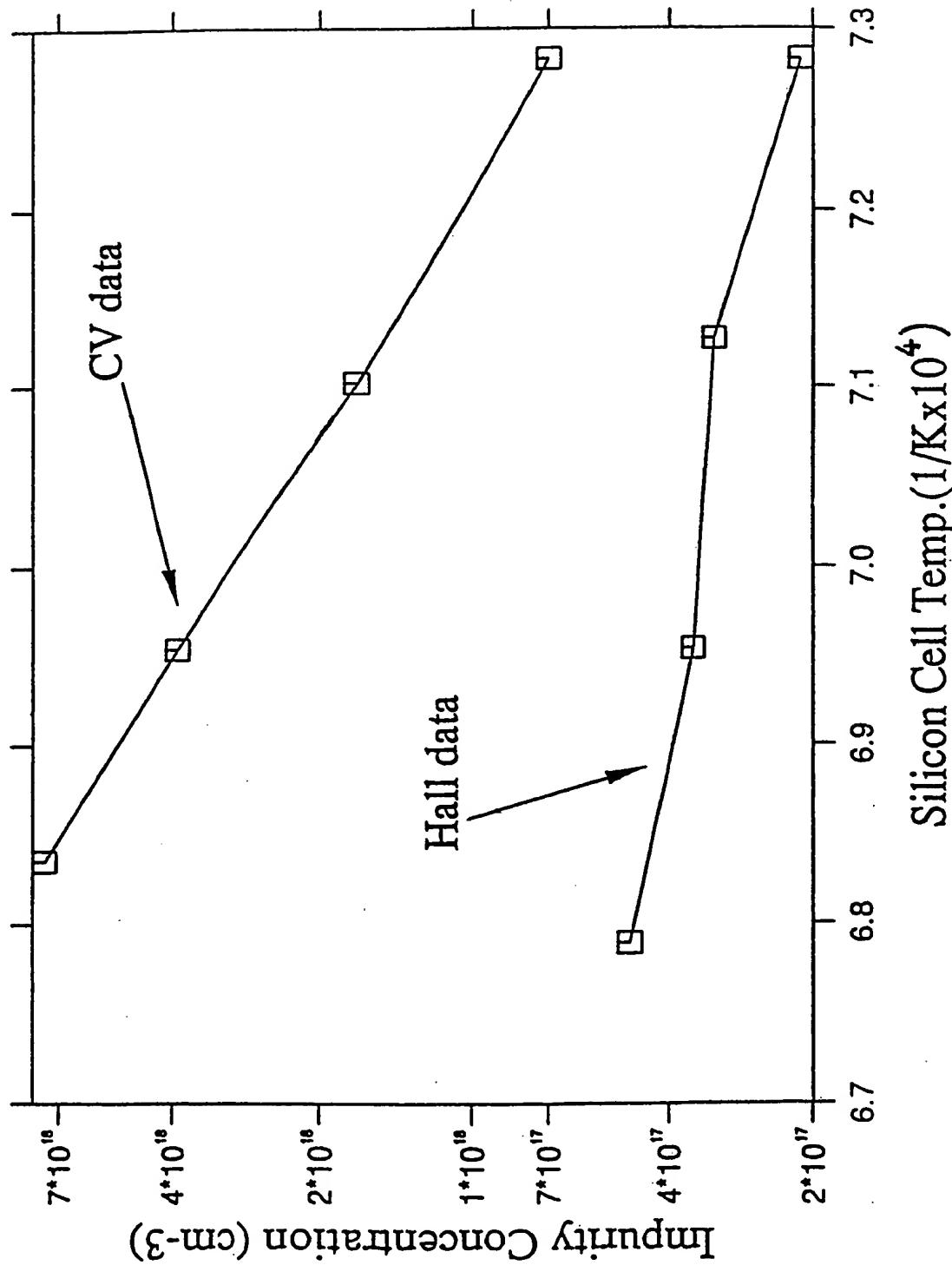


FIG. 8

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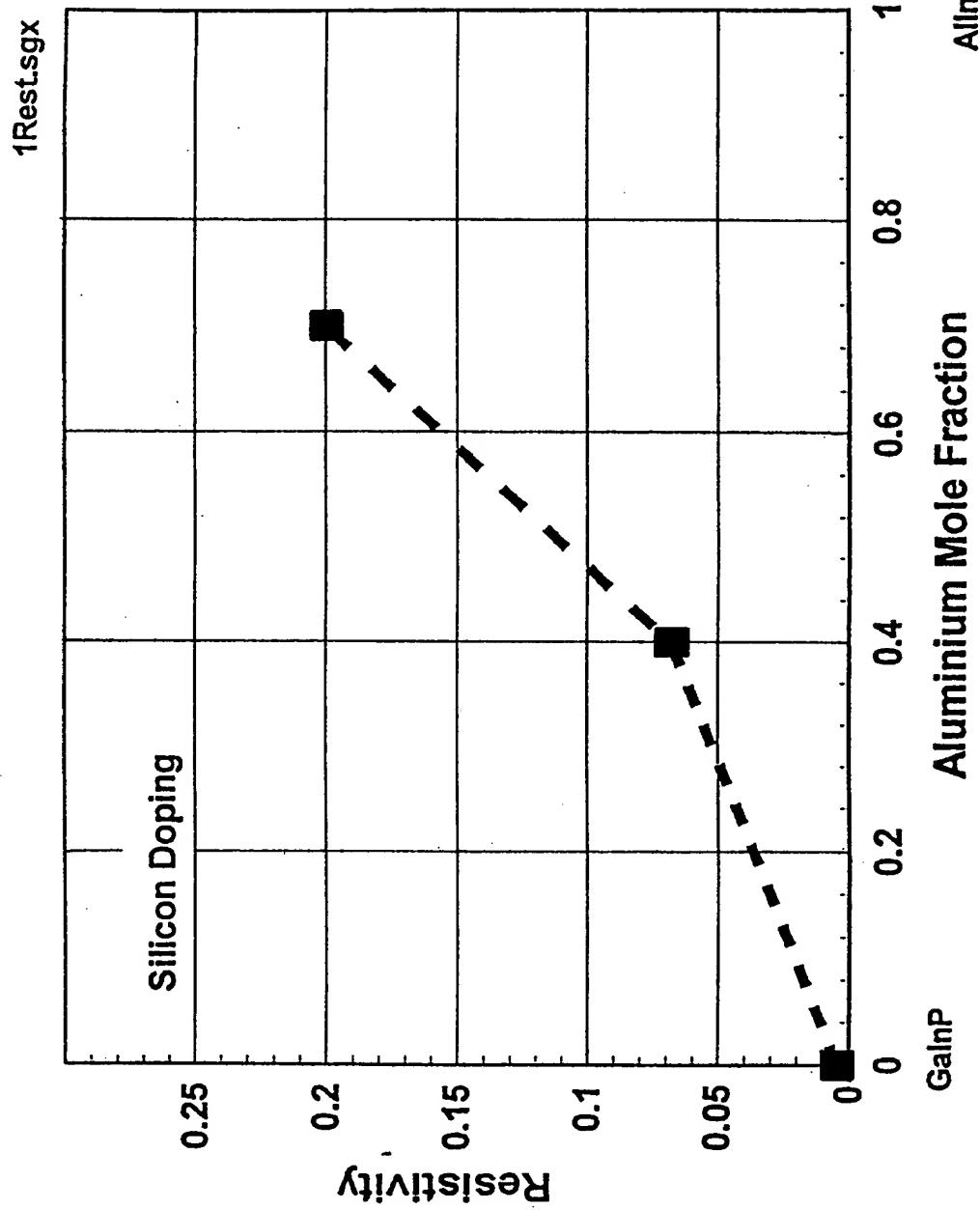


FIG. 9



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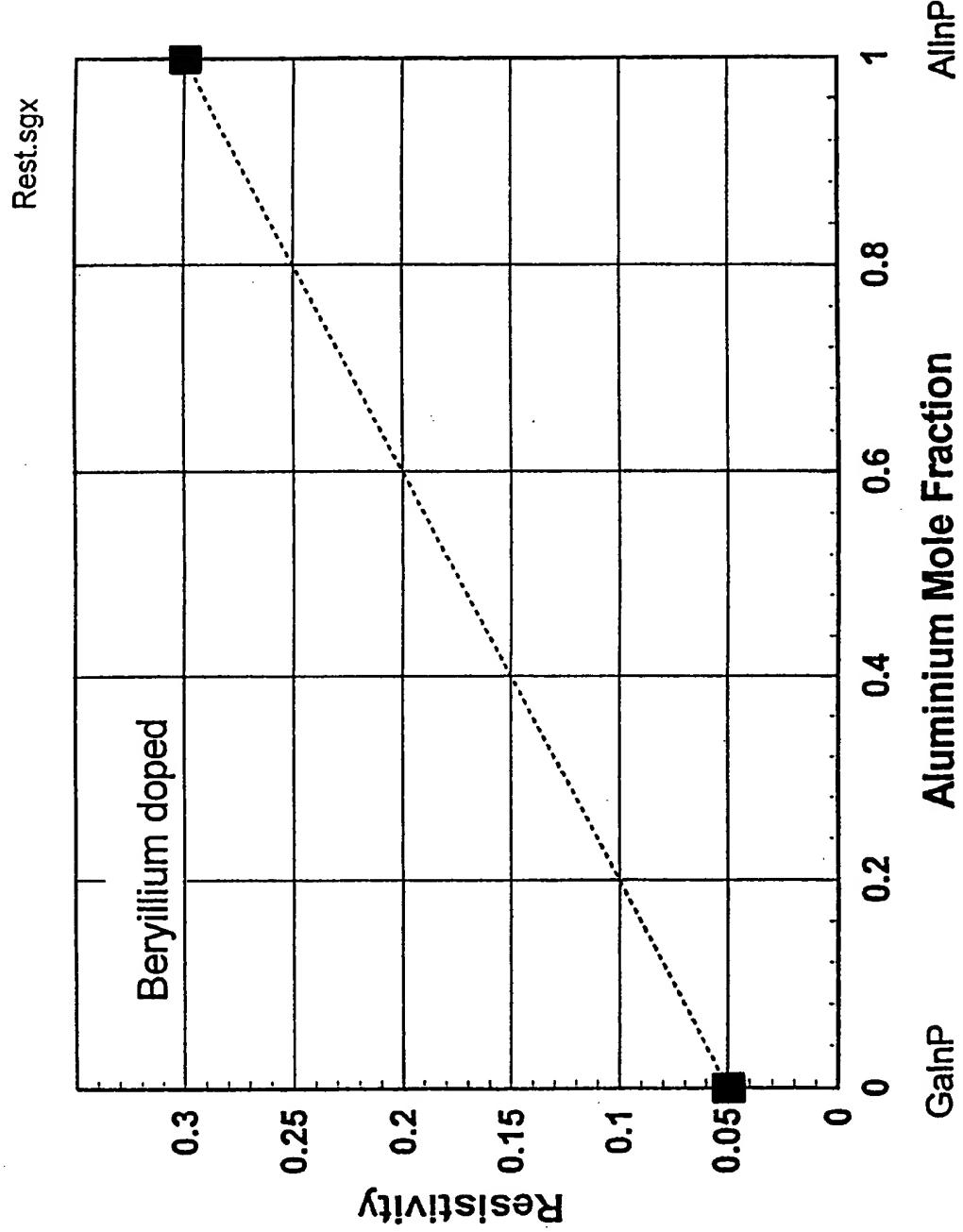


FIG. 10



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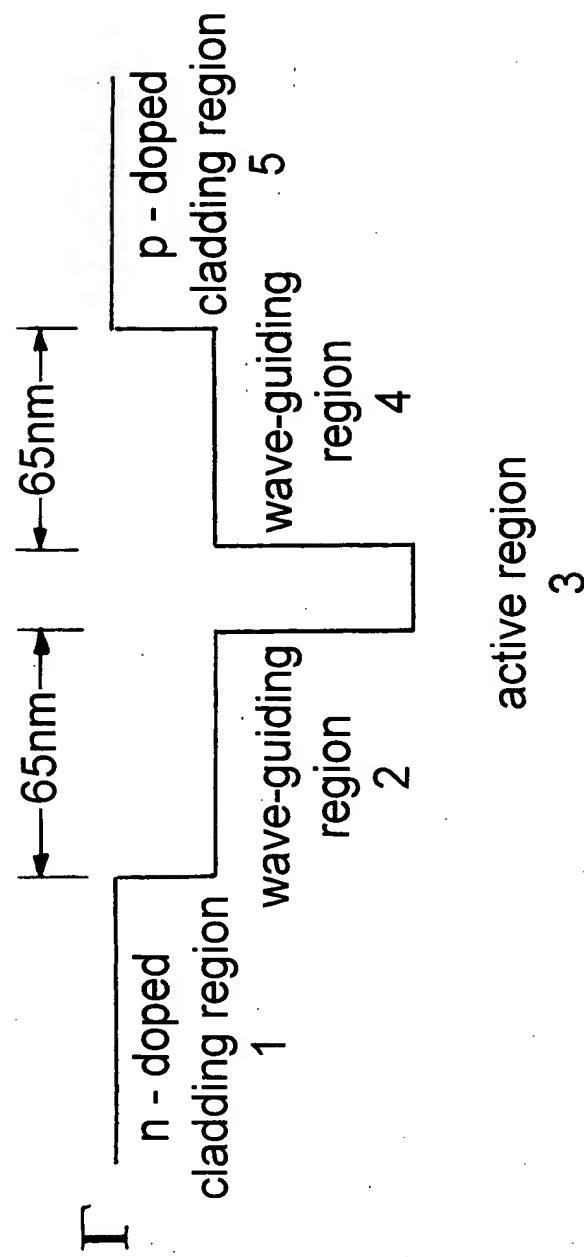
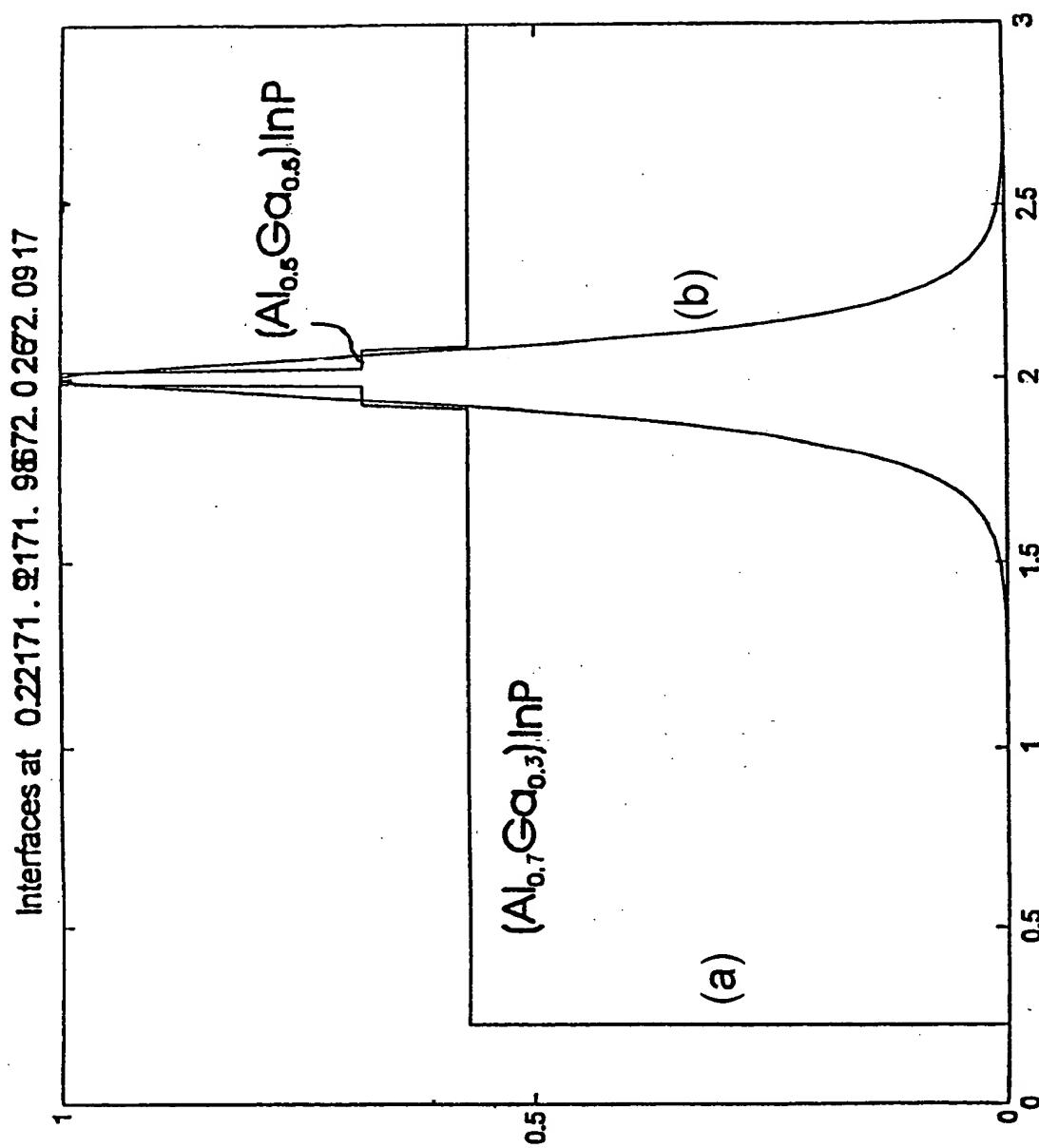


FIG. 11(a)



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FIG. 11(b)





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AlGaN<sub>P</sub>

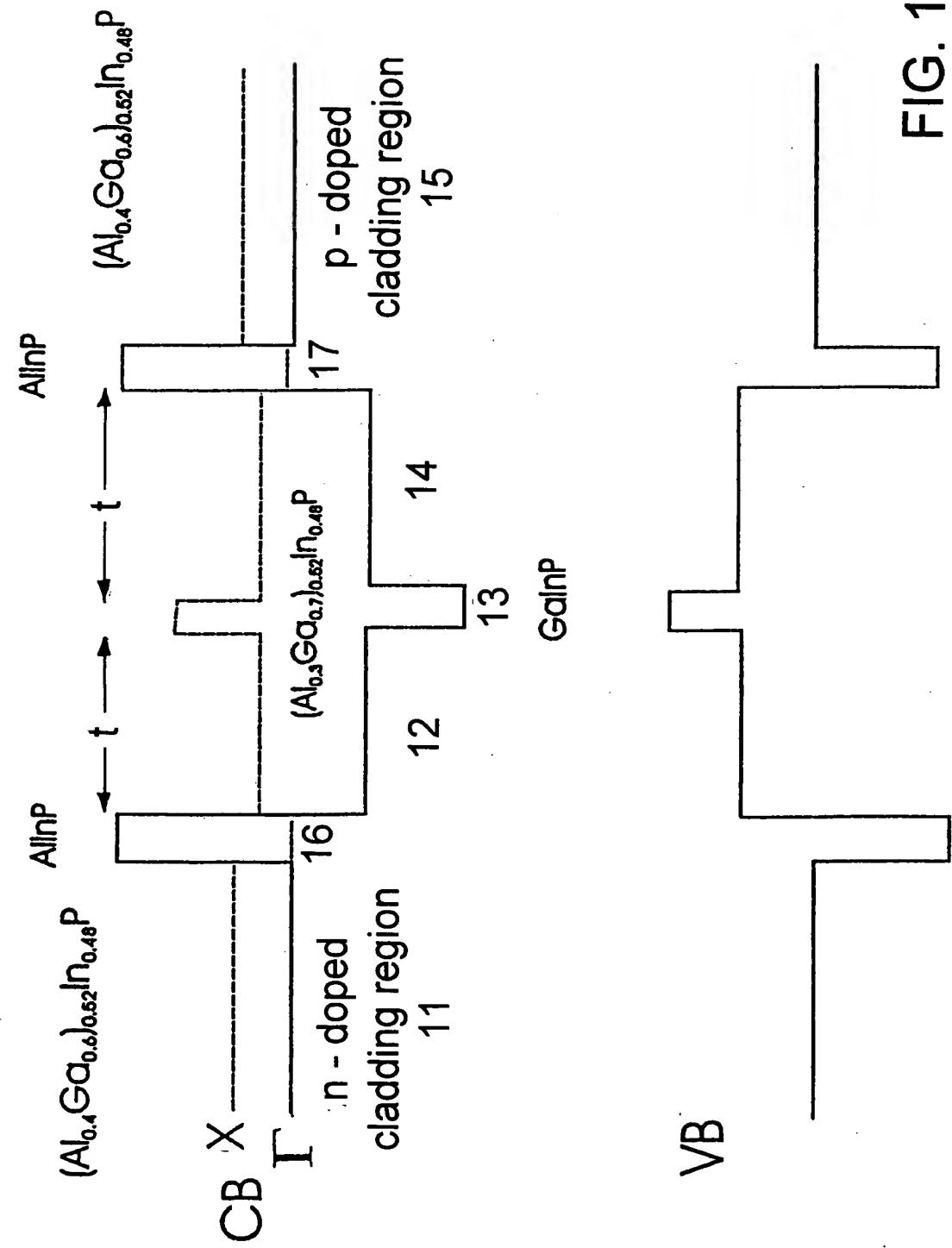


FIG. 12



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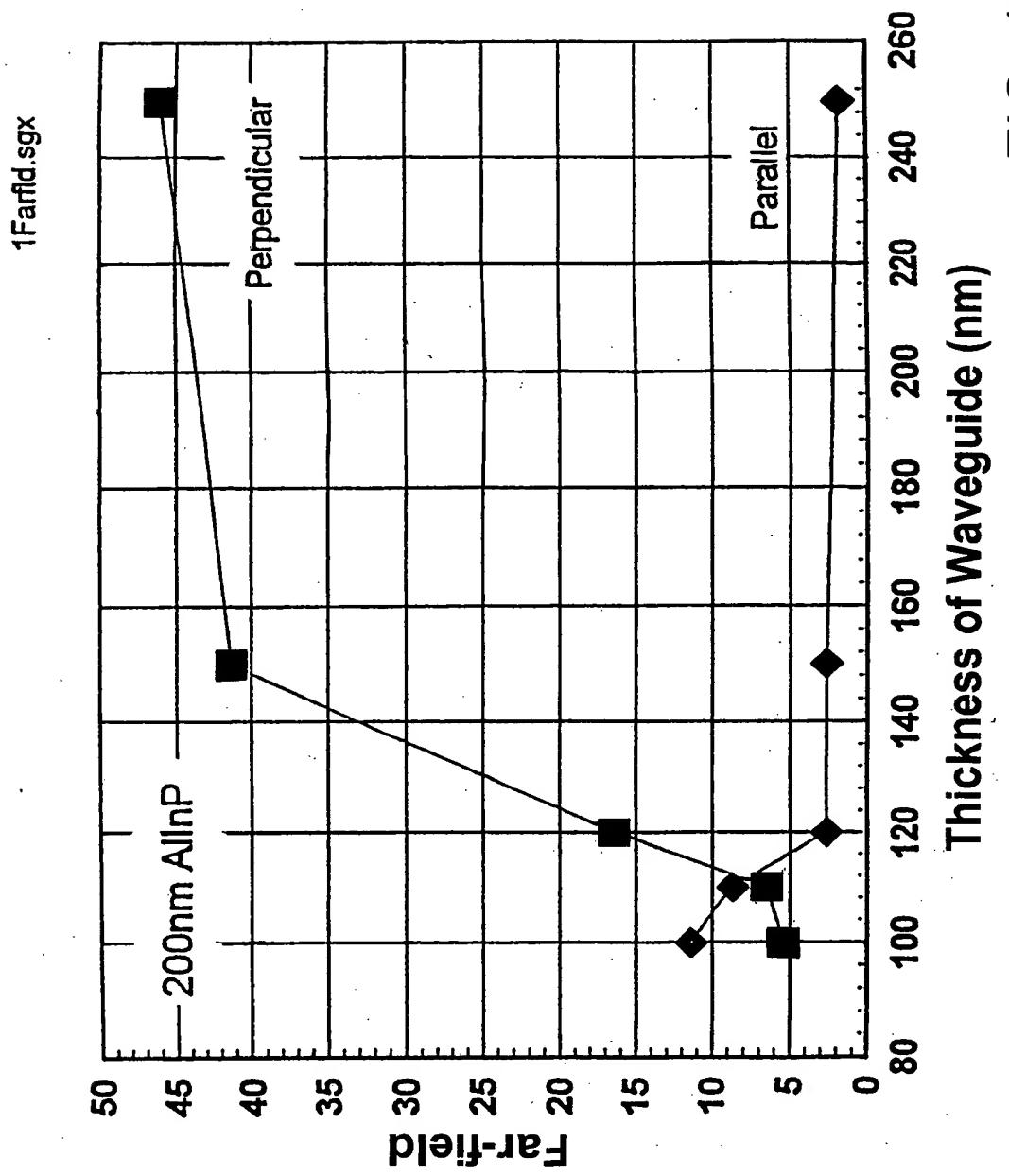


FIG. 13(a)



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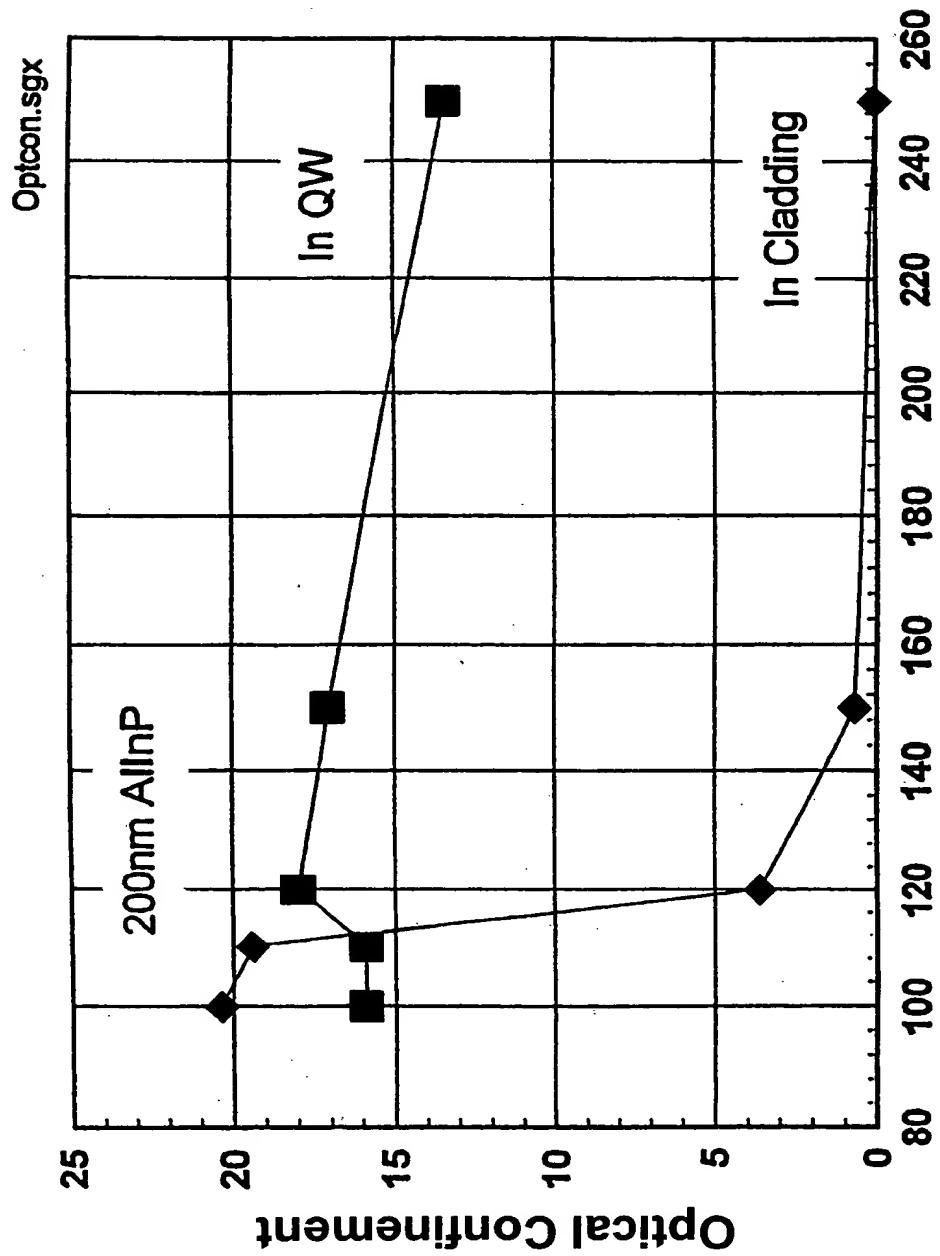


FIG. 13(b)  
Waveguide (nm)



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2Farfield.sgx

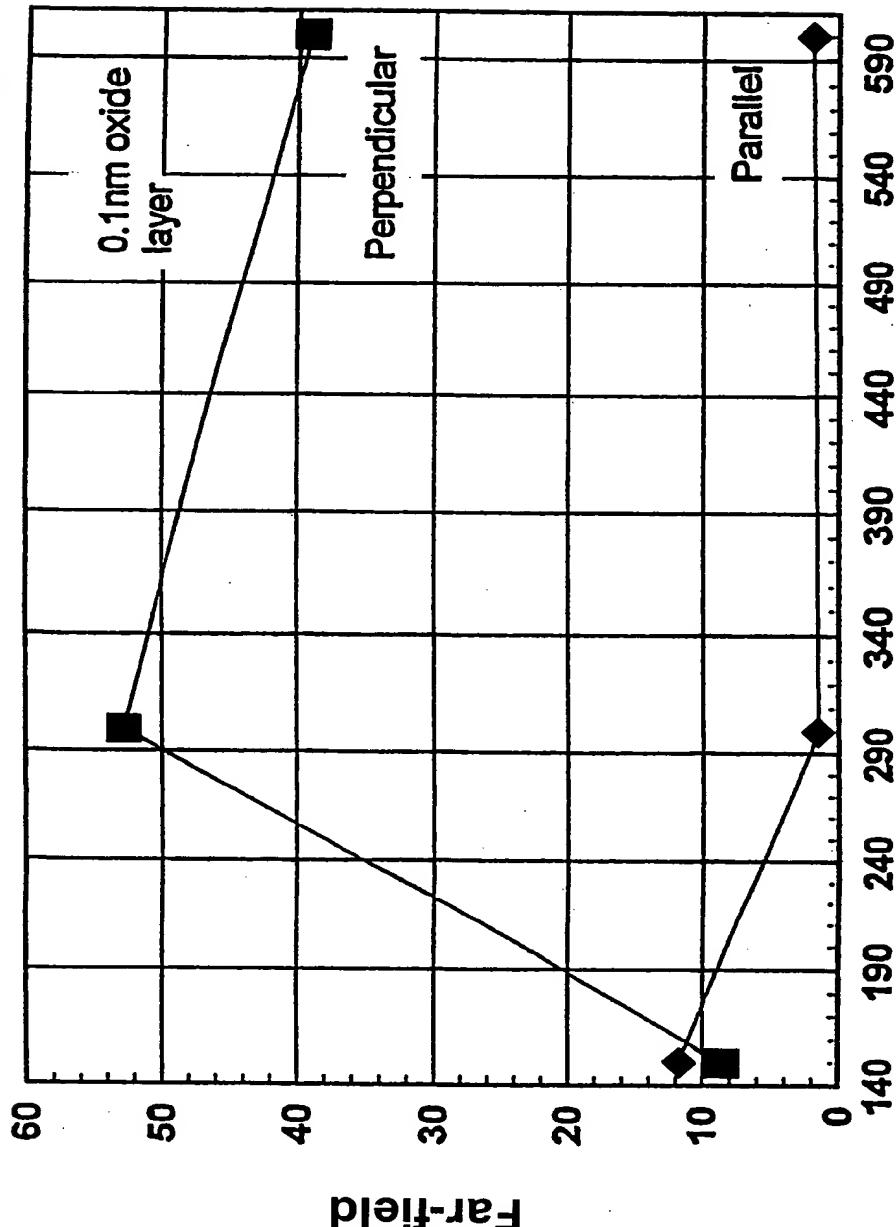


FIG. 14(a)  
Waveguide (nm)



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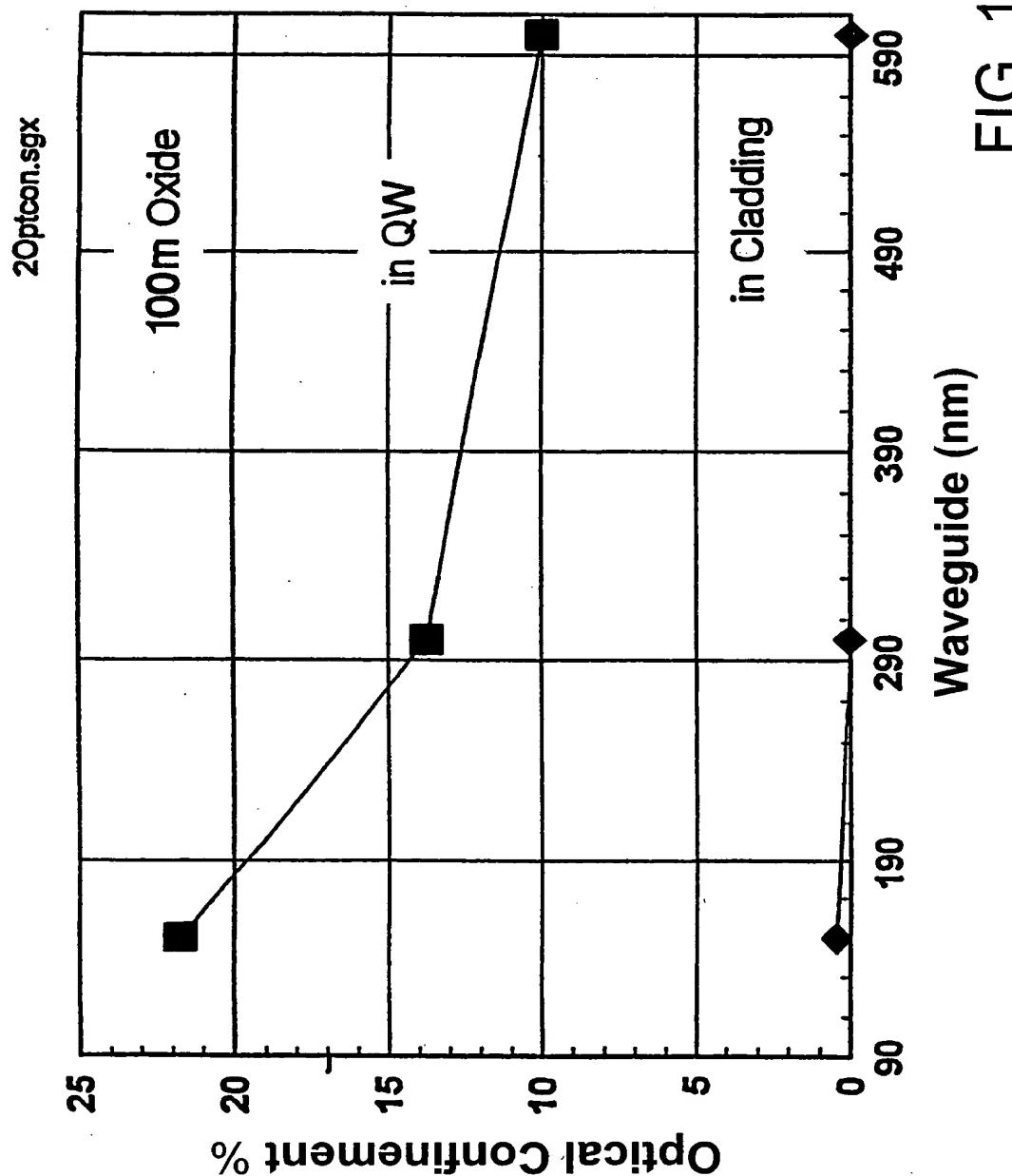


FIG. 14(b)